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ABSTRACT

The focus of the adult education field is shifting to adult learning. Current trends are the continued development of the concepts of andragogy and self-directed learning, increased emphasis on learning how to learn, and real-life learning. Cognitive psychology is influencing work in adult learning. The concept of intelligence as it relates to adults is moving away from the notion of IQ toward a recognition that intelligence has multiple aspects. Application of the concept of learning style has been hindered by confusion over terminology and lack of appropriate measurement instruments for adults. The teaching of learning strategies to adults tends to emphasize metacognition, memory, and motivation. Critical thinking is becoming more important in an environment complicated by an information explosion and rapid social and technological change. The influence of the social environment and culture upon learning is also being examined. The goal of learning in the social environment is action, often intended to cause social change. One method increasingly being used is participatory research, the ultimate goal of which is empowerment. Current trends in adult learning research point to a new image of the adult learner as an empowered learner--one who understands the learning process and the social environment and who can respond to the challenges of improving that setting. Adult educators must take a more active stance to meet learner needs for individual development and social reconstruction. The shift of research focus to the adult learner holds potential for mending the fragmented nature of the field of adult education. (145 references.) (SK)

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LEARNING AND REALITY: REFLECTIONS ON TRENDS IN ADULT LEARNING

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Robert A. Fellenz
Gary J. Conti
Center for Adult Learning Research
Montana State University

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FOREWORD

The Educational Resources Information Center Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) is 1 of 16 clearinghouses in a national information system that is funded by the Office of Educational Research and Improvement (OERI), U.S. Department of Education. This paper was developed to fulfill one of the functions of the clearinghouse--interpreting the literature in the ERIC database. Following ERIC/ACVE's publication, ***Trends and Issues in Adult Education, 1988***, this work takes an in-depth look at one of the trends identified in the earlier work--a focus on adult learning. This paper should be of interest to adult education researchers, practitioners, policy makers, and graduate students, as well as others interested in adult learning and cognitive research.

ERIC/ACVE would like to thank Robert A. Fellenz and Gary J. Conti for their work in the preparation of this paper. Dr. Fellenz is Senior Research Professor and Dr. Conti is Associate Professor at the Kellogg Center for Adult Learning Research, Montana State University. Since 1983 they have served as co-editors of ***Adult Literacy and Basic Education***; both are long-standing members of the Commission on Adult Basic Education and the Commission of Professors of Adult Education.

Dr. Fellenz has directed projects on learning modality and adult development and on staff development in adult education. He recently co-authored ***Effective Strategies for Teaching Adults***. Dr. Conti has served as member and chair of the Adult Education Research Conference Steering Committee. His most recent publication is the chapter, "Teaching Style and the Reflective Practitioner" in ***Adult Learning Methods: A Guide for Effective Instruction***.

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Ray D. Ryan
Executive Director
Center on Education and
Training for Employment

EXECUTIVE SUMMARY

The focus of the adult education field is shifting to adult learning. Three trends are influencing this change in focus: the continued development of the concept of andragogy, the struggle with the concept of self-directedness in learning, and increased emphasis on learning how to learn. Attention is presently being given to learning that is relevant to the living tasks of the individual--real-life learning. Because these tasks are distinct for each person, defy measurement, and seldom follow a clear pattern, development of this concept should remain a challenge for researchers throughout the decade.

Tremendous strides in cognitive psychology are influencing work in adult learning. The concept of intelligence as it relates to adults is moving away from the notion of IQ toward a recognition that intelligence has multiple aspects. Another issue being examined is whether mental capacities decline with age.

Learning style is also a significant emphasis in research and practice. Application of work in this area has been hindered by confusion over the terminology used as well as the difficulty of making comprehensive measurements of learning styles in adults. The concept is being used in practice, but a valid instrument is still needed.

Whereas learning styles are traits, learning strategies are techniques used to accomplish a learning task. The teaching of learning strategies to adults tends to emphasize metacognitive, memory, and motivational strategies rather than traditional study skills. Metacognition relates to awareness of one's thinking processes--understanding of one's ability to learn, cognitive strengths and weaknesses, and preferred learning style. It also includes the ability to identify the most effective procedures for accomplishing learning tasks and to monitor and revise strategies as learning progresses.

Study of memory functions may become more intense in the future as developments in cognitive psychology, emphasis on real-life situations, and growing numbers of older adult learners concerned about the effects of aging on memory stimulate interest in this area.

Another area of renewed interest is critical thinking. An environment complicated by an information explosion and rapid social and technological change requires attention to reflection and critical thought. Conversely, the influence of the social environment upon learning is also being examined. Sociology is contributing insights into the meaning of adult learning in a social setting. A key word in this discussion is culture, which provides the backdrop for experience and the common ground for interpreting it. Both learner uniqueness and cultural influences must be taken into consideration in each learning situation.

The goal of learning in the social environment is action, often intended to cause social change. One method increasingly being used is participatory research, in which people participate in investigating, analyzing, and making decisions about the problems that affect them. Participants use such techniques as popular theatre, fact-finding tours, and public meetings to generate knowledge and collaborate with outside experts while retaining control of the process and outcomes.

The ultimate goal of participatory research is empowerment. Together, the current trends in adult learning research point to a new image of the adult learner as an empowered learner--one who understands the learning process and the social environment and who can respond to the challenges of improving that setting. The adult educator's role as facilitator must be modified to a more active stance to meet the psychological and sociological demands of the individual development and social reconstruction of the learner. Real-life learning also requires a problem-centered curriculum based on social realities, shifting from an individualistic, inner-directed focus to a broader concern for community.

The shift of research focus to the adult learner holds potential for mending the fragmented nature of the field of adult education. With the learner as its basic unit of organization, the field can overcome artificial program specialties and enable a cross-disciplinary perspective to enrich service to the adult learner.

Information on adult learning research may be found in the ERIC system using the following descriptors: Adult Education, *Adult Learning, *Adult Students, Cognitive Processes, *Cognitive Psychology, Cognitive Style, Critical Thinking, Cultural Context, Educational Research, Educational Trends, *Learning Strategies, Memory, Metacognition, Participatory Research, Social Action, *Social Environment. Asterisks indicate descriptors having particular relevance.

INTRODUCTION

During the past decade, the field of adult education has changed radically. J. Roby Kidd (1983) predicted this change shortly before his death when he stated that he had come to an exciting realization: the focus of the field had changed from adult **education** to adult **learning**. He was so excited about this transformation that he described it in terms such as "a paradigm shift," a "perspective transformation," "a leap in consciousness" (p. 527).

Apparently, what so excited J. Roby Kidd about this new emphasis on learning was the implication that adult education was finally moving from a field of practice toward a field of study. As a field of practice, the emphasis in research and conceptual development had been on providing services, with learning viewed simply as one component of educational programs. But a shift to a field of study with the individual learner as the central concern opened whole new realms, such as self-directedness and individual development, to the field. Education, or the provision of formal services, now had effective learning as its conceptual base. Admittedly, no single, coherent theory of adult learning has yet emerged, but as Merriam (1987) stated, "The one factor that all adult education agencies, programs, and professionals have in commmon is that all deal with adults in learning situations. Perhaps that is why there has been more theory building in adult learning than in other areas of adult education. It is the adult learner, after all, which distinguishes this field from other areas of education" (p. 187).

One testimony to Kidd's insight is the type of books selected for the Cyril O. Houle World Award for Literature in Adult Education during the past few years. In 1984, it was Smith's (1982) book, ***Learning How to Learn***, that was honored by the field. Since then nearly every book selected has dealt primarily with learning: Brookfield's (1986) ***Understanding and Facilitating Adult Learning***, Daloz's (1987) ***Effective Teaching and Mentoring***, and Jarvis' (1987a) ***Adult Learning in the Social Context***. Another indicator of trends in adult education is the type of research being performed in the field. A review of the table of contents of the proceedings of the Adult Education Research Conference for the last decade shows that in 1979 only 25 percent and in 1980 33 percent of the papers dealt with adult learning in comparison to such topics as programming and policy development. By the end of the decade that percentage had risen to 49 percent in 1988 and 43 percent in 1989 (see ***Annual Adult Education Research Conference*** 1979; Coggins 1989; ***Proceedings of the Annual*** 1980; Warren 1988). The focus of the field has indeed switched from adult education to adult learning.

This focus on the learner can be traced to a number of movements in society and in education. In his 1983 article, Kidd pointed to such "radical" developments as insights into concepts and styles of learning and into

the interrelationship of learning and human development, the evolution of new locations in which learning was occurring and new media for communicating, and a redefinition of the role of the facilitator or learning professional. Again, Kidd's insight is borne out for, as the last decade of this century begins, the "hot topics" in journals, at conferences, and in adult education classrooms are learning styles and strategies, critical thinking, distance learning, self-planned learning, the influence of the social environment, and learning and intentional change. Three trends seem particularly relevant to this refocusing of the field: the continued development of the concept of andragogy, the struggle with the concept of self-directedness in learning, and the increased emphasis on learning how to learn as part of the whole concept of individuality in learning.

In 1979, the summer and fall issues of *Adult Education* contained "Critique: Andragogy Revisited" sections in which John Elias, Leon McKenzie, Russell Knudson, Robert Carlson, and Malcolm Knowles debated the meaning and appropriateness of the concept of andragogy. Knowles used other arenas, such as his column in *Training and Development Journal* (1980b) and his revision of *Modern Practice of Adult Education* (1980a), to clarify further his notion of andragogy. Many others have entered into this controversy, most notably perhaps Steven Brookfield (1986) in major segments of his *Understanding and Facilitating Adult Learning*. A most important result of these discussions was the reexamination of the role of the professional in adult education that it occasioned. Central to all the discussions of andragogy and common to all viewpoints was a definition of the facilitator in terms of promoting **learning in the adult**. Major discussion revolved around such questions as: Do the differing life tasks of adults affect their learning processes so as to make them radically different from children? How much direction can and should adults exercise in planning their own learning? Are adults motivated to learn about things that do not have immediate application or use? The questions were not new, but they did lead to a refocusing of attention on adult learning.

Concurrent with this re-examination of andragogy was a multifaceted exploration of self-directedness in adult learning. Allen Tough had shocked the adult education world in 1971 with the publication of *The Adult's Learning Projects*. This inductive approach to the examination of adult learning opened a whole new world of inquiry: self-initiated, self-planned learning. For many educators this became a more exciting and realistic field for inquiry than formal classroom or laboratory learning. Roger Hiemstra, for example, confessed: "About 1978 I decided to set up what I call my 15-year research agenda in this area--just to understand more about what's going on. . . . I now have about 15 dissertations that have been completed and another four or five that are underway looking at different aspects of self-directed learning" (Fellenz and Conti 1989, p. 28). Hiemstra was by no means alone in this search, for as Brookfield (1984) observed, "By almost any measure conceivable, research into self-directed adult learning must constitute the chief growth area in the field of adult education in the last decade" (p. 14). Not all were in accord on concepts related to self-direction in learning. A review of the 1984 and 1985 *Proceedings of the Annual Adult Education Research Conference* shows at least a half dozen presentations that struggled with definitions, concepts, and assessment of self-directedness in learning. But again, the contentions centered discussion mainly on learning in the adult.

A third major educational trend that intensified interest in the adult learner had historical origins in the G.I. Bill and the influx of older students into postsecondary education. This forced institutions to acknowledge "nontraditional" students and create service, program, and instructional vehicles to meet the needs of such individuals. A major result was reinforcement of the traditional adult education emphasis on individuality in instruction. In the 1980s this concern with individuality was expressed through two major efforts, programs promoting learning how to learn and investigations into adult learning styles. Smith's (1982) ***Learning How to Learn*** captured much of the thinking on the topic and advocated, among other things, that adults need to understand their particular learning styles. Coggins (1988), Conti and Fellenz (1986b, 1988), and Sisco (1989) reported on learning style research at conferences, and Bonham (1988) evaluated the status of learning style assessment devices. Again, a major outcome of much of this work was a call for more insight into the adult learning process.

The result of this focus on the adult learner has been an increased interest in mathetics. Kidd (1983) explained: "Mathetics is all about disciplines that offer insights and clarifications about learning.... The importance of the concept of mathetics is that it is a way of linking together most of the fields from which a data bank about learning is developing" (p. 534). Certainly, concepts from the fields of philosophy, anthropology, economics, and biology as well as sociology and psychology are being referenced more frequently in the literature of adult education. The outcomes of such conceptual development are the major focus of this monograph.

Real-Life Learning

Basic to any consideration of trends in adult learning is the attention presently being given to learning that is relevant to the living tasks of the individual in contrast to those tasks considered more appropriate to formal education. Such learning is often referred to as "real-life" or "real-world" learning or learning that results in "practical" knowledge.

In the adult education world, a historical basis for interest in such life-related learning can be traced back to the work of Houle (1961) and Tough (1971). It is also apparent in the literature of the adult literacy movements such as those proposed by UNESCO (1970) or the Adult Performance Level (APL) project (Northcutt 1975). Learning tasks in such literature are described as conducive to human development or useful in coping with life. They are engaged in to accomplish a specific, desired goal, for pleasure, or to improve self-esteem. Such approaches move the focus on adult learning from study suggested by others to learning elected by the individual.

In cognitive psychology literature, renewed interest in "practical intelligence" or knowledge useful in real-world settings can be seen in the works of Neisser (1982) and Wagner and Sternberg (1986). Neisser dismissed prior research on memory because most was done on topics or in settings that had little or no practical interest to adult learners. He insisted that future research be done on memory tasks that are faced in daily life. Wagner and Sternberg listed seven ways in which academic learning tasks differ from those faced in the real world. Academic problems are (1) formulated by others, (2) often have little interest to learners, (3) have all relevant information provided, (4) are disembodied from ordinary experience, (5) are clearly defined,

(6) have one right answer, and (7) often have one acceptable way to arrive at a solution (p. 52).

Concern for the social and cultural environment in which adults function and the learning tasks that grow out of such life tasks have also had a great impact on the type of learning being studied. Leaders such as Paulo Freire and Myles Horton have injected into the adult education world concepts such as consciousness raising, praxis, and empowerment. Naming the world, or identifying the reality of the situation in which one exists, became the challenge of the adult learner. As Shor (1980) observed in his ***Critical Thinking and Everyday Life***, Freire's ideas reinforced the curriculum he was developing. "Dialogue was our foundational learning process; co-investigation of reality and systematization of daily knowledge were our primary vehicles for advancing language skills" (p. xxv). A similar concern for acknowledging the relevance of situational learning tasks has been voiced by those concerned with learning in later life. Schooler and Schaie's (1987) collection, ***Cognitive Functioning and Social Structure over the Life Course***, questioned repeatedly the supposition that older adults lose some of their cognitive ability and suggested that as people age they simply concentrate more on real-life learning tasks.

One caution, however, must be raised at this point. Practical knowledge and real-life learning may entice the interest of investigators of adult learning, but such concepts are often nebulous and difficult to examine. School-oriented tasks can be defined, incorporated into a curriculum, and assessed as completed or not. The real-life learning tasks of adults are distinct for each individual, seldom follow a clear pattern, defy measurement, and often are so episodic in nature that beginnings, patterns, and outcomes are impossible to define. Conceptual development in this area will remain a challenge for researchers throughout the last decade of this century.

COGNITIVE PSYCHOLOGY AND ADULT LEARNING

Traditionally, adult educators have borrowed heavily from the field of psychology. The tremendous strides in cognitive psychology during the past decade or two have become a veritable gold mine for educators who wish to focus on adult learning. This trend was augmented by the attention of numerous psychologists to the learning and developmental processes of adults. Examples of this interaction can readily be seen in such areas as learning styles, adult intelligence, critical thinking, and strategies used in the learning process. These and related topics are treated in this chapter.

Intelligence in Adults

An "intelligence quotient," based upon some expert's conception of the mental ability of an average person at a certain age or grade level, has never been a very useful construct to practicing adult educators. There have been too many cases of adults who stumbled through elementary or secondary school only to emerge as intellectual leaders in later life and too many instances of young academic whizzes who cannot perform the practical tasks of adult, daily life. In many cases, the result has been a tongue-in-cheek acceptance by educators of the old saw: Intelligence is what an intelligence test measures. Kidd (1973) described the dangers inherent in this when he wrote: "This was amusing enough if not taken seriously, but it led to circumscribed views as well as definitions: intelligence was seen almost as a single quality. The growing realization that there are many capacities or abilities: mechanical, social, verbal, abstract, spatial-perceptual has also led to an appreciation that there are **intelligences**, not just **intelligence**" (p. 74). Although Kidd was ahead of his time in his approach to intelligence, the practical solution to this dilemma for many practicing adult educators was a general disregard of the concept of intelligence.

One recent attempt by an adult education researcher to define and measure one of these intelligences was a study conducted by La Pierre (1988) while a postdoctoral fellow at the Center for Adult Learning Research at Montana State University. Taking the concept of doodling from the field of applied visual arts, La Pierre concluded that--

> this study provided a way to evaluate an individual's thinking process in regard to figural structures that represent spatial reasoning abilities. This thinking style does not conform to the traditionally thought of ways of reasoning. However, it is obvious that it does exist, and that concern for this kind of thinking process as a legitimate form of intelligence is necessary in order to understand and to teach various individuals. (p. 26)

A review of the proceedings of recent Adult Education Research Conferences

indicates limited attention to adult intelligence by participants. Farr and Moon (1988) and Sisco (1989) discussed the application of Sternberg's triarchic theory of intelligence to adults, and Valentine and Ebringhaus (1989) reported on the relationship of cognitive ability and achievement in basic education programs. To date, studies on intelligence by adult educators appear limited.

Among cognitive psychologists, Robert Sternberg has been most prolific in discussing the concept of intelligence as it relates to adults. According to Sternberg's (1985; forthcoming) triarchic theory, there are at least three aspects to intelligence. A componential approach examines the mental components involved in analytical thinking. Individuals endowed with this type of intelligence are "Alices," analytic wonders who are experts at test-taking and academic problems. But there are also "Barbaras" who are very creative thinkers and capable of pulling together elements of the internal, mental world and outside experience. These people may not score well on tests. People with a third type of intelligence Sternberg characterized as "Celias." These people work well within a specific context, displaying "smartness" or insight into a situation that many who do well on academic exams simply do not possess.

Perhaps it is because Sternberg entered into the examination of intelligence with practical experience in test construction and IQ measurement that he speaks to many of the concerns of adult education practitioners. He is bothered, for example, by the great emphasis put on speed in measuring intelligence and on the insistence on minute accuracy in measurement. Speed and accuracy sometimes interfere with success in real-world tasks. Another example of particular interest to those working with older learners is the whole issue of age and learning and the troublesome fluid versus crystalized theory of ability. Sternberg and Berg (1987) questioned such theories that developed from deductive conclusions as to the nature of intelligence, conclusions that do not take into account the challenge of changing life contexts. They concluded:

> The question of whether there is a decline in intelligence with age is an important and legitimate one to ask, so long as one is willing to accept as an answer, "It depends." Test-relevant abilities do decline, on the average, but life-relevant abilities may or may not, depending on the course and contexts of one's life. (p. 20)

It is such attempts to bring intelligence measurement into the real world and to bring reality into the analysis of intelligence that make Sternberg's theories and suggestions, such as those in ***Intelligence Applied: Understanding and Increasing Your Intellectual Skills*** (1986), of great potential value to adult educators.

Learning Styles

Smith (1982) insisted that learning style is one of the three essential ingredients of the process of learning how to learn. He described style as "a person's highly individualized preferences and tendencies that influence his or her learning" (p. 17) and concluded that people demonstrate consistency in the style they follow. Although the concept of learning style was somewhat new to adult educators, Even (1981) had applied brain lateralization to adult learning, and Simpson (1981) had tested field dependence in an adult education setting. More significant, however, was the way learning style fit in with adult educators' traditional interest in the individualization

of instruction. Soon articles on learning style began to appear in *Lifelong Learning* (Dorsey and Pierson 1984; Even 1982) and in the proceedings of the Adult Education Research Conference (Conti and Fellenz 1985; James 1984; Moore 1982). Instruments produced by Kolb, French, and Canfield were being used in adult learning situations. In 1986 Hoffer reported the results of a study in which short learning activities were presented to adults in four different sensory modalities. By then learning style had become a significant trend both in adult education research and in practice.

Much of the interest in learning styles had developed out of a long history of research and theorizing among cognitive psychologists. Messick et al. brought much of this work to the attention of educators in the 1976 publication, *Individuality in Learning*. This work included a glossary of 18 cognitive style dimensions (pp. 14-22) that had been investigated by various researchers. As Witkin (1976) summarized in the same edition, "From evidence accumulated in the course of more than twenty years of research in many different centers, we now know that all of us have characteristic modes of functioning that we reveal throughout our perceptual and intellectual activities in a highly consistent and pervasive way. We call these modes of functioning cognitive styles" (p. 39).

One of the issues that caused some confusion in the application of the work done by these researchers to the field of education related to the terminology used. Psychologists examined cognitive styles; educators talked of learning styles. Keefe (1982) provided a solution to that issue by offering the following definition: "Learning styles are cognitive, affective, and physiological traits that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (p. 44). This broad definition appealed to many educators; however, it raised measurement problems.

A more serious difficulty in applying the research in cognitive functioning and learning styles has been the absence of a comprehensive and valid measure of learning style suited to adults. Much of the research Witkin (1976) mentioned was done on some very specific cognitive traits, often in a laboratory setting. His own Embedded Figures Test and the Myers-Briggs Type Indicator with their exclusive attention to field dependence/independence and preferences in perception/judgment respectively are good examples of this lack of comprehensiveness. Educators wanted assessment devices that portrayed the majority of learning characteristics of the students with whom they worked. Few learning style instruments even attempted to do this; those that did had serious flaws. Sisco (1987) attempted to develop cognitive profiles of students using a series of assessment devices. However, Bonham (1988) analyzed many of the difficulties of using instruments such as those developed by Witkin, Hill, Kolb, or Canfield with adult learners and concluded that "the problems raised in this article can best (or only) be solved by revising the instruments or designing new ones" (p. 15). Thus, it seems apparent that, although many of the concepts relating to cognitive traits and learning style factors are being integrated into adult learning situations, major advances in research await the development of a comprehensive and valid instrument.

Learning Strategies

Learning strategies are the techniques or skills that an individual elects to use in order to accomplish a learning task. They

differ from learning style in that they are techniques rather than stable traits and they are selected for a specific task. Such strategies vary by individual and by learning objective. Often they are so customary to learners that they are given little thought; at other times much deliberation occurs before a learning strategy is selected for a specific learning task.

In a sense, today's attention to learning strategies grew out of the continued interest of many learning specialists in study skills. As McKeachie (1988) commented,

> Through the 90 years of history of teaching study skills, general rules of study skills have evolved ... these recipes, or rules, have brought about success often enough to have become a fairly well established part of the college and university scene. What is different today is that we have a better theoretical understanding of the reasons these study strategies work. Cognitive psychology has developed a set of laboratory research studies and theoretical concepts that are much closer to the natural learning settings in which study strategies have been applied. (p. 3)

Learning strategies have grown out of the tradition of study skills but differ significantly from that tradition. Rather than skills in note taking, outlining, and test passing, learning strategies tend to promote metacognitive, memory, and motivational strategies.

Various adult educators have been active in the teaching of study skills to the nontraditional or older student entering a formal learning situation. Apps, for example, has long been known for his interest in this area and in 1982 published the second edition of his ***Study Skills for Adults Returning to School.*** Smith (1982) made training in learning one of the three essential components of his theory of learning how to learn. However, the modern approach to learning strategies has not yet received broad attention in adult education literature.

The Center for Adult Learning Research at Montana State University has begun a long-range research and development project related to adult learning strategies. In the fall of 1988, the research staff under the direction of Robert Fellenz investigated a conceptual framework useful in the development of an assessment device to discover what learning strategies adults do use in real-life situations. Metacognition, memory, metamotivation, resource management, and critical thinking were selected as vital aspects of the adult learning process. A device for the assessment of learning strategies in each of these areas has been developed and is in the process of field-testing at the time of this writing.

During the past decade various cognitive psychologists have turned their attention to strategies for learning. Much of this work is referenced in Wittrock's (1986) ***Handbook of Research on Teaching*** or in ***Learning and Study Strategies*** edited by Weinstein, Goetz, and Alexander (1988). As Mayer (1988) said, "What is new with the current interest in learning strategies is that it can be based on an emerging cognitive theory of human learning and memory" (p. 21).

Attempts to integrate this emerging cognitive theory into the teaching of learning strategies have occurred in a number of places. Claire Weinstein (1987) developed a Learning and Study Strategies Inventory (LASSI), which she uses in classes at the

University of Texas to develop student study skills. At the University of Michigan, Pintrich et al. (1988) have used their Motivated Strategies for Learning Questionnaire (MSLQ) to do the same. Both instruments examine various cognitive strategies as well as motivational and resource management concerns.

The major areas examined within the learning strategy area are of concern in themselves for they do have a vital impact on the teaching/learning transaction of adults. Therefore, several of these areas are examined individually.

Metacognition

Metacognition is popularly conceived of as thinking about the process of thinking. The concept was introduced into cognitive psychology in the 1970s by Flavell (1976). Others, such as Brown (1982) and Yussen (1985), soon joined Flavell to develop this construct by observing active, knowledgeable learners who had the ability to reflect on and control their learning processes. Such learners appeared able to make their learning activities more efficient. Thus Brown's model of metacognition emphasized self-regulatory tactics used to ensure success in the learning endeavor.

During the early part of the 1980s, cognitive psychologists investigated extensively metacognitive abilities in children especially as they relate to study skills, attention, memory, comprehension, and information processing in reading and math. Much of this research is summarized in *Metacognition, Cognition, and Human Performance*, a two-volume work edited by Forrest-Pressley, MacKinnon, and Waller (1985). Although the concept of metacognition remains a bit hazy, perhaps because various authors attempt to include more and more within the construct, it has become evident that the learner who is conscious of his or her learning processes exercises more control over those processes and becomes a more effective learner.

Although metacognition has not been a commonly used term in adult education, the concept is not unfamiliar in the literature. In describing their adult learning principles, Brundage and MacKeracher (1980) wrote:

> Learning how to learn involves a set of processes in which the individual learner acts at least partially as his own manager of change, and his focus of change is his own self-concept and learning processes. This requires that the learner be able to conceptualize his own learning process and be able to pay some attention to how he goes about learning ... [and] trust himself to manage this process. (p. 30)

Smith (1982) argued, "Self-understanding links directly to learning how to learn when learners become sensitive to, and in control of the learning process, in other words, more aware of themselves as learners" (p. 57). Earlier, Burman (1970) had put it more simply: "We normally do best those things which we know how to do. I do not think learning is any exception" (p. 50).

The three major areas of metacognitive knowledge that were identified by Flavell (1979) are awareness of self, task, and strategy. Awareness of self encompasses the insights and assumptions an individual has about personal cognitive abilities. This would include one's self-concept of ability to learn, insights into cognitive strengths and weaknesses, and awareness of one's learning style. Useful task insights include the ability to distinguish among intellectual

challenges and to identify the most effective procedures for conducting various types of learning tasks.

Metacognitive strategies are usually divided into three areas. Planning strategies include eliciting purpose from self and the situation, organizing, and identifying the steps essential to the learning process (Yussen 1985). Metacognitive monitoring keeps us on the track as we learn. It reminds us of purpose, of resources, of previous experience, and of our strengths and weaknesses. Adjusting strategies help us evaluate and regulate our learning activities. They include revision of learning plans and change of learning strategies in light of new knowledge or greater insight into the learning task or our own learning abilities.

Memory

Neisser (1982) boldly challenged previous research on memory, stating that 100 years of effort by psychologists left very little to show because such researchers had avoided the interesting or meaningful issues. "If X is an interesting or socially significant aspect of memory, then psychologists have hardly ever studied X" (p. 4). Neisser went on to say, "What we want to know, I think, is how people use their own past experiences in meeting the present and the future. We would like to understand how this happens under natural conditions" (p. 12). Although this statement may not have caused a change in memory research, it does mark a significant movement to studies of memory as it is used in everyday life.

The study of memory in everyday life reopens many of the problems discussed in the section on practical intelligence. It is difficult to set parameters around real-life learning activities. They vary greatly from individual to individual and can be quite episodic in nature. However, questions such as the following are being asked by researchers. If the use of imagery improves recall in laboratory situations, does it also work in everyday study situations (Schmeck 1988)? Can the use of memory strategies such as imagery, grouping, and elaboration help in the learning of English as a second language (O'Malley et al. 1988)? In view of the long history of use of mnemonics in daily activities (Rachal 1988), can the teaching of specific mnemonic devices support adult memory tasks (Zechmeister and Nyberg 1981)?

For the most part adult educators seem content to reference traditional studies on memory skills in adults (Long 1983). A review of the 1985 to 1989 proceedings of the Adult Education Research Conference showed no presentation dealing specifically with memory (*Adult Education Research Conference* 1985; Coggins 1989; Inkster 1987; Landers 1986; Warren 1988). Several practice-oriented articles were published in *Lifelong Learning* (Jones and Cooper 1982; Ogle 1986). It is noteworthy that Ogle (1986) did conclude that "in cases where previously researchers merely found and accepted memory differences between young and old people, researchers are now beginning to ask why these differences exist and whether they are actual losses of memory function or, perhaps, positive changes in memory functions" (p. 27).

Perhaps these comments do not relate much of a new trend in research on adult memory. It does appear though that the combination of renewed interest by adult educators in cognitive psychology, the movement to study memory in real-life situations, and the growing numbers of older adult learners with their concerns about memory ability predict a more

intensive and relevant study of memory functions in the future.

Critical Thinking

Decision making, problem solving, logic, rational thinking, or as it is more likely to be called today, critical thinking is an aspect of education that has received intense study for centuries. So why even mention it in a monograph on current trends? The renewed interest in critical thinking today is characterized by the content to which it is applied, that is, the realities of life. We live in an information society. We are bombarded constantly by new information, by newspeak, by visions. Much is equivocation, propaganda, or at least contradictory of prior information. Our more complicated social environment poses new challenges for clear and creative thinking; so much so that any recent report on education or convocation of educators that does not include a segment on critical thinking appears to be the oddity.

Brookfield's (1987) ***Developing Critical Thinkers*** caught the attention of many in the field of adult education, perhaps because it included chapters applying his theory of critical thinking to the workplace, to television reporting, to political issues, and to personal relationships. However, the works of Argyris (1982), Meyers (1986), and Stice (1987) were also referenced frequently.

The four components of critical thinking in Brookfield's (1987) model are (1) identifying and challenging assumptions, (2) challenging the importance of context, (3) imagining and exploring alternatives, and (4) reflective skepticism. Such a model moves this approach to thinking from a totally intellectual activity to a more holistic endeavor. As Brookfield insisted, "Critical thinking is not seen as a wholly rational, mechanical activity. Emotive aspects--feelings, emotional responses, intuitions, sensing--are central to critical thinking in adult life. In particular, the ability to imagine alternatives to one's current ways of thinking and living is one that often entails a deliberate break with rational modes of thought in order to prompt forward leaps in creativity" (p. 12).

Another perspective to critical thinking was introduced to the adult education world by Mezirow (1981). He presented "the beginnings of a critical theory of adult learning and education" (p. 3) based on the work of Jurgen Habermas. Mezirow used Habermas' idea of three domains of learning--work, practical, and emancipatory--and expanded on learning as "emancipatory action." Mezirow related this to his earlier work on perspective transformation. Interest in such a critical theory of adult learning grew, as indicated by Collins' 1985 presentation at the Adult Education Research Conference and subsequent preconference sessions conducted on the topic of critical theory.

Interest in critical theory introduced a sociological dimension to the concept of critical thinking. Jarvis (1987b) offered a model for integrating the personal and social aspects of learning through a reflection on experience. He concluded that "learning that results from and the meaning that is attributed to experience depends upon the inter-relationship between a personal stock of knowledge and the socio-cultural-temporal milieu within which the experience occurs" (pp. 171-172). Others such as Giroux (1988), McLaren (forthcoming), and Shor (1980) are attempting to clarify how adults draw meaning from their societal environment and in turn give critical thought to that context.

THE SOCIAL ENVIRONMENT AND LEARNING

Although the major focus of the shift from adult education to adult learning has been in the psychological area, a more subtle movement has taken place in the area of learning in the social environment. Many of the issues one confronts every day are beyond the scope of the individual. Issues such as racism, discrimination, employment, housing, health care, and the environment can only be addressed through collaborative efforts. As the world grows increasing interdependent, artificial barriers that previously isolated problems and issues are breaking down. Consequently, more and more people are recognizing the similarities between such issues as poverty in the Third World and economic problems in Appalachia or on the reservations of Indian peoples. Collectively, these real-life problems have led to a recognition of the influence of the social environment upon the process of adult learning.

Learning in the social environment assumes a participatory mode. Learners are expected to be aware of the elements in their environment and to analyze them critically. This requires active involvement and the willingness to ask political questions concerning the power relationships of the elements encountered. In relating this participatory approach to literacy education, Fingeret (1989) pointed out that--

> it is based on the belief that learners--their characteristics, aspirations, backgrounds, and needs--should be at the center of literacy instruction. This belief implies that the relationship among learners and program staff is collaborative. The traditional literacy education model places skills at the center and implies a hierarchical relationship between educators (who know the skills) and students (who "need" to learn the skills). Thus, learners in participatory efforts help to define, create, and maintain the program; those in traditional programs are merely asked to receive it. (p. 5)

Social learning is rooted in the experiences of the people. The role of experience in adult learning has a rich history that can be traced from Lindeman (1926). Horton stressed that experience is an integral part of social learning because--

> if you don't value a person's experiences, I don't know how you can value them as a person. Poor people know that; sometimes academicians don't know that, but poor people do. When you value their experiences, then they recognize that you respect them. That attitude and atmosphere is as important as any other thing. It is an extension of the ideas of helping people value their own experiences so they can be something to learn from. An unexamined experience is just a happening; it is just something you know. Experiences don't educate, but you can tear experiences apart and try to figure out all that is in there. Then it becomes the best educational experience, and it's

> their experience. It is rooted in them. (Conti and Fellenz 1986a, p. 8)

However, Horton went on to point out that these experiences are not restricted to the individual. Instead, they are used to understand group situations and political relationships. People's experiences become the mechanism for their integration into both the understanding and the solution of broad social problems.

> If you can get them to value their peers' experiences, then this can be extended to their peers, their past, and other countries. People don't understand that when you get people appreciating themselves and their peers in Hardin county, then they can appreciate what is going on in Nicaragua and South Africa because those are poor working people too. It is an extension of their experiences. (ibid., p. 8)

Learning in the social environment also assumes that change is inevitable and therefore a driving force for further inquiry. The intellectual seeds for this concept can be traced and directly linked to the ideas of the 19th-century German philosopher Hegel.

> Change, according to Hegel, was the rule of life. Every idea irrepressibly bred its opposite and the two merged into a synthesis which in turn produced its own contradiction. And history, said Hegel, was nothing but the expression of this flux of conflicting and resolving ideas as they fired now this and then that nation. Change--dialectical change--was immanent in human affairs. (Heilbroner 1961, p. 118)

An integral component of this dialectical process for learning is *praxis*. Praxis is the term Freire (1970) used to describe the alternating process of reflection and action. Learning is not isolated inquiry; instead it is exploration, followed by reflection and by action. In this dialectical process, the action stimulates a need for further inquiry. This in turn is followed by reflection and action in a contir uous pattern. Brookfield (1986) declared:

> This notion of praxis as alternating and continuous engagements by teachers and learners in exploration, action, and reflection is central to adult learning. It means explorations of new ideas, skills, or bodies of knowledge do not take place in a vacuum but are set within the context of the learner's past, current, and future experiences. (p. 15)

The influence of the social environment upon adult learning is emerging both from mainstream adult educators and from outside sources that are being imported into the field. For example, Brookfield (1986) listed the collaborative spirit, action and reflection, and critical reflection as three central principles of effective practice in facilitating adult learning. In addition, he repeatedly emphasized the importance of the contextual setting upon learning. On the other hand, Cervero (1988) incorporated the ideas of Schon (1987) into professional continuing education. Both Cervero and Schon argued the need for reflective practitioners capable of using their experiences to solve problems in real-life situations.

Sociology and Adult Learning

Although the temptation is to turn to sociology for additional insights on learning in the social environment, Armstrong (1988)

cautioned against the uncritical reliance upon this discipline. As both a trained sociologist and adult educator, he pointed out:

> In Marxism, the notion of praxis has been reserved for describing the dialectical relationship between thought and action so that when we engage in practical activity we have theoretical consciousness of it, and whilst engaged in the activity are able to reflect upon it. This focus on praxis and its significance for those in education and adult education stems not only from a sociological perspective, but issues from other disciplines that contribute to educating the educators. Sociology is but one possible vehicle for leading to the development of critical action, and as has been argued, not all sociology necessarily leads in this direction. (p. 14)

Nevertheless, those writing from a sociological analysis continue to contribute insights into the meaning of adult learning in a social setting. Like Brookfield (1987) whose work was mentioned earlier, Jarvis has a background in both sociology and adult education and has argued for an increased role in critical thinking in adult learning. In order to deal with the knowledge explosion in the social arena, "learners must be aware of the processes of the manufacture of information and be confident that they can process it adequately in order to make it their own personal knowledge in which they may have the certainty that the phenomena are real and have the characteristics attributed to them" (Jarvis 1985, p. 14).

Two recent conferences highlight the increased attention of adult educators to learning in the social environment. The preconference to the 1987 Adult Education Research Conference held in Wyoming dealt with critical theory (Inkster 1987). Although some sessions were highly theoretical, others explored the practical implications of ideas such as those proposed by Gramsci and featured the field-based reflections of the leaders from Highlander Research and Education Center. The dialogue and networking that resulted from this preconference enhanced the legitimacy of inquiry about learning in the social environment as an important part of adult education. This feeling was further strengthened with the Transatlantic Dialogue Conference held in Leeds, England (Zukas 1988). This joint research conference, sponsored by the North American and British adult education research associations, had a definite European flavor. Here the traditional liberal arts disciplines bore more influence than they usually do in the United States. Instead of being dominated by the psychological outlook, social science perspectives permeated the conference. Over 40 percent of the presentations dealt with topics related to learning in the social environment such as social policy, community action, cross-cultural analysis, international issues, values, and culture. Clearly, in a world setting, there is a growing importance for learning that is related to real-life situations within the learner's experience.

Culture and Learning

A key word in the discussion of learning in the social environment is culture. Horton emphasized that the culture is a totality; it is the base. It is the internal set of operating standards that determines how people operate, how they communicate, how they express themselves, and in essence how they make meaning of other people's actions (J. Pease-Windy Boy,

personnel communication, January 15, 1988). Each group's culture is a unique and complex mesh of shared patterns and concepts that are conveyed over time through language and imitation (Barnouw 1987, p. 4).

Those in the dominant culture seldom use the term "culture" and tend not to think critically about it. However, those who are in subcultures and whose indigenous culture is threatened by the dominant culture are forced to define and defend their culture in order to preserve it from either outright or subtle extinction. Because of the power and wealth that exists in the capitalist countries, this distinction is harder yet more necessary in highly industrialized nations (Shor and Freire 1987, pp. 139-140). Thus, much learning in the social environment revolves around clarifying elements of the culture that influence the learning process and that can be used to enhance the learner's experiences.

A group's culture can be bounded in many ways. Many Third World countries rely heavily on Freire's (1970) distinction between the "haves" and the "have nots." Others have a regional identity such as the Appalachian poor. Some are linked by ethnic origin such as Native Americans, Blacks, or Hispanics. Still others arise from geographic conditions such as being rural (Barker 1985). Regardless of the distinguishing characteristics giving the group a cultural identity, the critical element is that the group operates in a homogeneous fashion (Bopp, Bopp, and Lane 1984a) that is different from the main culture and that there is a constant danger of the dominant culture subsuming this culture.

Fingeret (1983) and de Avila (1983) reported the existence of such cultures in literacy networks. Fingeret found that illiterate adults operate in an oral subculture where face-to-face exchange replaces written communications. Those from this group "are often made to feel that their culture does not support literacy development, and their rich patterns of social interaction are not viewed as resources appropriate to the instructional setting" (Fingeret 1989, p. 11). In a follow-up study investigating the reward system for the network system that Fingeret uncovered, de Avila discovered that unique cultural characteristics of the Hispanic community reinforced the network and that the mutual confidence from this exchange "nurtures dignity and positive self-concept on the part of the nonreader" (p. 127).

Thus, the culture is often the organizing unit for learning in the social environment. It provides the phenomenological backdrop in which people ground their experiences and the common grounds for interpreting these experiences. However, it is a mistake to assume that the culture dictates how each individual will react in the learning situation. Work with the learning styles of Native American adults in tribal colleges indicates that in each learning situation the uniqueness of each individual learner must be taken into consideration while simultaneously heeding immediate cultural influences (Conti and Fellenz 1988, p. 71).

Learning and Social Action

The goal of learning in the social environment is action. Praxis demands that reflection be followed by action. Since people are asking critical questions about the political relationships in their society, this action often leads to conflict. Both Horton and Freire saw conflict as a powerful, positive force for bringing latent issues to the forefront and for fostering their resolution (Conti 1977). In her introduction to Horton's (1989) autobiography, Lewis

discusses the interrelationship of action and conflict.

> Together people share their experiences, analyze their problems and learn how to work toward basic changes in society. The goal is not reform or adjustment to an unjust society but the transformation of society.
>
> It is education for action. It is dangerous education; and although much emphasis is on forming strategies to confront the system without being destroyed, people are encouraged to push the boundaries, to be creative in solving problems. Often this means pushing to the place where they get into trouble. Myles insists that until people take some risks and gain some independence from the system, they are not free to learn or to act. As people try to be part of the decision-making process, they discover that **learning** about democracy involves **working** to replace, transform and rebuild society to allow for equal participation. (p. xxi)

The theme for social action is echoed in much of the material related to learning in the social environment. In the award-winning educational film *You Got to Move*, Phenix (1985) captured the spirit and methods of Southerners as they realized they needed to take action in areas such as literacy and the preservation of the environment. In organizing community-based literacy and workplace literacy programs, Anorve (1989) stressed that this type of education "aims at reaching a level of action-reflection-action. It is precisely this process that leads community-based groups to the level of consciousness at which participants can analyze the historical and structural causes that shape their reality and take action aimed at overcoming oppressive forces" (p. 36). A participatory research project organized to investigate the sources of land ownership in Appalachia led to local groups forcing changes in the county tax structure and to the defeat of state legislation to provide tax rate benefits to the coal industry (Gaventa and Horton 1981). Thus, the learning that is occurring in the social environment has a purpose--to direct informed social action.

Participatory Research

Merriam (1986) pointed out that adult education suffers a research-to-practice dilemma in deciding what questions will be researched, how these questioned will be investigated, and how the results will be disseminated. One of her solutions is for action research strategies involving collaboration between participants and researchers throughout all phases of the study. "Greater use of this mode of inquiry will help to dismantle the notion that research activity is the exclusive monopoly of 'experts' or institutions rather than those most likely to be affected by it" (p. 6). Such an approach to research is congruent with Fingeret's (1984) contention that all who are involved in adult literacy education are researchers because they are involved in the multiple steps of understanding the situation, defining the problem, developing working hypotheses for solving the problem, devising a plan of action, and collecting information to determine how well the plan worked or what future actions are needed (p. 4).

This type of action research is known as participatory research. It is characterized by people personally analyzing the problems that affect them (Cain 1976). Although the people may seek the help of

outside "experts," they retain control over the decision-making process of the research. "Instead of becoming dependent on experts, the people become experts themselves" (Horton 1989, p. 208). As a group, they learn how to identify and define their problem, how to collect relevant information, how to analyze this information, and most important, how to use this information. The overriding goal of this research is learning in order to take action on a social issue.

Participatory research combines community participation in decision making with methods of social investigation to involve the people in the research process so that it can serve the needs of the individuals rather than those of the policy makers who need convenient, portable information or researchers who survive by collecting, packaging, and selling knowledge (Hall 1977). In this process, it strives to be a liberating force by providing a learning process for critically understanding social problems, their structural causes, and possible ways of overcoming them (***Participatory Research*** 1982, p. 1). Because of this goal, participatory research is drastically different from traditional forms of research.

> The classical paradigm lays emphasis on value-neutrality of the researcher; makes objectivity as the hallmark of the research process; suggests complete unilateral control by the researcher over the entire research processes; treats people as objects only responding to the researcher's questions; and attempts to study people and social phenomena as the natural sciences do. (Tandon 1981, p. 21)

Participatory research, on the other hand, is committed to the empowerment of learning for all those who are engaged in the process and to the ultimate goal of fundamental structural transformation for improving the lives of those involved (Hall 1981). To accomplish this, participatory research is composed of the interrelated processes of (1) the collective investigation of problems and issues with the active participation of those effected by the research, (2) the collective analysis by the participants in a process by which they come to understand not only the problem but also its underlying structural causes, and (3) the collective action by the participants aimed at both long-term and short-term solutions to the problem (***Participatory Research*** 1982).

The development of participatory research resulted "from the continued and ever-increasing exploitation and oppression of a large majority of people" (Tandon 1981, p. 21). Although elements of a participatory approach to research exist in various social sciences, the growth of attention to this method in adult education can be closely associated with the efforts of the International Council for Adult Education (ICAE) in Toronto. Because of the implicit cultural dependency inherent in the dominant international research paradigm "based on empiricism and positivism and characterized by an attention to instrument construction and rigour defined by statistical precision and replicability," alternative ways of uncovering knowledge were developed in the Third World (Hall 1981, p. 8). In 1977 the Participatory Research Network was formed in conjunction with the ICAE. This group, which has key organizers in Africa, Asia, Europe, Latin America, and North America, has given clarity to the meaning of participatory research and to related issues.

Participatory research is an integrated process. The initial step is a problem-

posing process in which participants identify a problem they have in common and wish to solve. This process involves not only the naming of the problem but also a questioning of its underlying causes. Such an understanding is essential to taking effective action. In this process, many commonly accepted ideas are challenged, and different positions on issues are openly discussed. (*Participatory Research* 1982, p. 2)

The central purpose of participatory research is the generation of knowledge. Although people have historically generated their own practical knowledge, modern technology and science have developed the myth that this function is reserved for trained experts (Tandon 1981). However, participatory research maintains that people are capable of creating their own knowledge and that the researcher is a collaborative learner in the process. Borrowing from Gramsci, participatory research assumes that each group contains "organic intellectuals" who are not intellectuals in the traditional sense but who are community members capable of creating the knowledge needed to solve and understand the problems facing the group (Hall 1981; Jackson 1981). By involving the researcher as a learner in a cooperative venture, participatory research also avoids Gramsci's concept of ideological hegemony, which focuses on the way in which the dominant group uses intellectual and moral constraints to maintain control over others without recourse to overt violence (Alden 1981; Watkins 1983). Hegemony is maintained by the ruling class achieving a popular consensus that permeates all social structures and by producing a group of "intellectuals" to give legitimacy to this view of society (Codd 1984; Watkins 1983). "Organic intellectuals" who are indigenous to the group, however, can critique the common sense perpetuated by the ruling class and can free the group for social action different from the unchallenged ways of perceiving and interpreting the world (Codd 1984). Such an approach is fundamentally different from the structural functionalism position, which accepts the assumption of balance and harmony in society and rejects the notion of the existence of inherent conflicts among various groups in society (Anisef et al. 1986). Instead, it accepts the creation of popular knowledge as a form of "anti-hegemonic" activity (Hall 1981, p. 14).

Participatory research draws upon the basic adult education principles of participation and responsibility. The impetus for ideas may come from an outside researcher, but "in all cases, the outside researcher is involved particularly in building an indigenous capacity for collective analysis and action and the generation of new knowledge by the people concerned" (Hall 1981, p. 10). People may participate at different levels depending upon the nature of the problem; however, control of the research must always rest with them. In this participatory mode, they take responsibility for the knowledge that is created and for taking action with this knowledge. Thus, participatory research "is a democratic approach to investigation and learning to be taken up by individuals, groups and movements as a tool aimed at social change" (*Participatory Research* 1982, p. 4).

A good example of participatory research in the social environment is the Appalachian Land Ownership Task Force, which was mentioned earlier (Gaventa and Horton 1981; Horton 1989; *Participatory Research* 1982). Although the image of Appalachia is that of poverty, the area is rich in natural resources. However, this wealth is not evenly distributed because of the pattern of land ownership and use. In order to uncover who owned the land, a

group of local residents initiated a research project with the assistance of the staff at the Highlander Research and Education Center. A regional alliance was formed, funding was secured, and a massive participatory research project was undertaken. Although the total project incorporated various research techniques and involved varying successes and failures, it succeeded in training a large number of people throughout the region in doing land ownership research and in providing them with useful data that could be used for political action. Participatory research projects such as this allow people collectively to (1) investigate their problems with their full participation throughout the entire process, (2) analyze the problem in such a way as not only to develop a better understanding of the problem but also to gain insights into its underlying structures and causes, and (3) take action on their own problem (Horton 1989).

Participatory research is practiced around the world and employs a variety of methods including group discussions, public meetings, research teams, open-ended surveys, community seminars, fact-finding tours, collective production of audiovisual materials, popular theatre, and educational camps (*Participatory Research* 1982). In Tanzania, discussion teams of government extension workers, adult educators, technical experts, and researchers undertook an 8-week participatory project in the villages to improve grain storage. In Botswana, participatory research was used to design appropriate technologies for rural development. In South Korea, women used public meetings to organize a cooperative store for inexpensive food and consumer goods. In Peru, participatory research techniques were used to draw on the popular culture and technology to develop improved farming and cattle raising techniques. In Canada, research teams worked with Native Americans to develop a water supply and sewage disposal plan that was suitable for their reservation (*Participatory Research* 1982). In Indonesia, participatory research was used to train local people to work with their neighbors to revitalize existing institutions and to gain control over social programs that were designed to benefit them but that were often controlled by outside agencies that did not reflect the community's values (Dilts et al. 1986) and to develop a learning system for linking needs with local resources (Colletta 1976). In northern Botswana, popular theatre using techniques such as drama, songs, and dance was used to involve people and raise their awareness in social issues such as literacy and resettlement education (Kidd and Byram 1977; Kraai, MacKenzie, and Youngman 1979). In Canada, Native Americans and the University of Lethbridge (Alberta) have joined in the Four Worlds Development Project to develop a holistic curriculum based on Native values in order to address alcohol and drug abuse in the community (Bopp, Bopp, and Lane, 1984a-d).

Although many examples of participatory research can be found in Third World countries (Dubell, Erasmie, and de Vries 1980; *Research in Adult Education* 1979), it has also been used in urban settings and in projects that cut across national boundaries. In Chicago, participatory research was used as a means for public housing residents to learn about resident management from tenant management leaders in other cities and to develop an action agenda for improving their development (Horton and Zacharakis-Jutz 1987). In Philadelphia, a literacy class used participatory research techniques to investigate AIDS in order to get answers that they could understand and to address their personal questions; in Massachusetts, similar techniques were used in a literacy class to

produce indigenous reading materials that depict the struggles in ordinary people's lives and that can be passed on to future classes for their reading (Gillispie 1989). On an international scale, 40 women representing 12 countries used participatory research to explore common problems affecting women who work in the new "global assembly line" that has developed as part of the microchip industry (*International Consultation* 1986). Another study examined the nature and extent of women's participation in adult and nonformal educational programs in the Arab states, South Asia, Southeast Asia, the Caribbean, Latin America, Africa, and the South Pacific (Bernard and Gayfer 1983). These numerous examples of participatory research in action demonstrate the "wide variety of problems, approaches, tensions and outcomes that have occurred in participatory research in very different political, social and economic contexts" (*Participatory Research* 1982, p. 26).

Empowerment

The ultimate goal of learning in the social environment is empowerment. Cunningham (1983) viewed empowerment in learning as when learners free themselves of oppression by demystifying knowledge and by critically redefining social reality in their own terms. Others refer to empowerment as popular education to help people transform the present domination system so that they can become agents of their own history (Vargas 1988) or as liberatory programs to develop independent, critical, and politically active learners in a democratic society (Heaney 1982). Refusing to remain pawns, people demonstrate that they should decide their own fate (Boyer 1989). Regardless of how it is defined, empowerment involves using learning from the social environment to understand and deal with the political realities of one's social and economic situation.

Empowerment is an appealing term because it reflects the essence of democracy--an informed public taking responsibility for its own actions. In adult learning it has been used in various ways. Reacting to the junto report from the previous National Adult Education Conference (Conti 1986), the planning committee for the 1987 conference that was held in Washington, D.C., incorporated the word "empowerment" into its conference theme and required program presenters to relate their presentations to this concept. More often, it is related to broader societal issues that deal with gender, race, poverty, or other insidious forms of oppression. In each of these instances, it is connected with an attempt to use adult learning as a tool to allow individuals and groups to participate equitably and democratically in a local, national, and global society.

CONCLUSION

The focus of the field has shifted from adult **education** to adult **learning**. This refocusing has not only seen the continued development of the concept of andragogy, the struggle with self-directedness in learning, and the increased emphasis on learning how to learn, but it has also witnessed a growing emphasis on learning in real-life settings. Darkenwald and Merriam (1982) pointed out that the aims and objectives of adult education are influenced by the nature of the learner, the role of the teacher, and the nature of curriculum. Likewise, Seaman and Fellenz (1989) argued that the key factors in the educational process are the learner, the teacher, the content, and the situation. These similarities suggest that three elements are crucial in adult learning activities: the learner, the teacher, and the environmental components. Although the adult education literature is rich with discussions of these elements, the emerging emphasis on real-life learning not only amplifies the understanding of each of these but also challenges accepted assumptions concerning these elements.

First, reflection on these trends in adult learning should cause us to pause and ask: How can we legitimize proclamations that the goal of adult education is the creation of self-directed learners, the promotion of individual fulfillment, or the recreation of society and then proceed to build programs that have no lasting effect either on the learner or on the real world? These trends proclaim a new image of the adult learner; it is the vision of an **empowered** learner.

Trends in adult education and cognitive psychology that advance the understanding of the individuality of learning experiences and that promote learner self-knowledge and control of personal perceptions and judgments provide for potential empowerment of the individual. An appreciation of one's learning style, the development of strategies that promote learning, and insight into metacognitive processes enable people to exert control over learning processes and outcomes. Awareness of the assumptions and value sets developed over time together with procedures for thinking critically about issues loosen those bonds that inhibit interaction with the reality being faced. Such insights and skills, which can be categorized as learning how to learn, give power to the individual learner.

Yet, this is not empowerment in itself; it does not necessarily lead to praxis. Although it does provide an essential basis, a freedom, and a potential for the individual to integrate learning and action, individual development by itself does not reform society. Freire explained the distinction as well as the connection between these two concepts:

> Even when you individually feel yourself **most** free, if this feeling is not a **social** feeling, if you are not able to use your **recent** freedom to help others to be free by transforming the totality of society, then you are exercising only an individualist attitude towards empowerment or freedom. . . . While the individual

> empowerment or the empowerment of some students, the feeling of being changed, is not enough concerning the transformation of the whole society, it is **absolutely necessary** for the process of social transformation. Is this clear? The critical development of these students is absolutely fundamental for the radical transformation of society. Their curiosity, their critical perception of reality, is fundamental for social transformation but is not enough by itself. (Shor and Freire 1987, pp. 109-110)

What else, in addition to the development of critical learning skills, is essential to the empowered adult? In keeping with Freire's thinking, empowerment also entails an increasing awareness both of the social-cultural context that affects one's life and the potential one has for transforming that society. Although today's critical theorists such as Freire, Shor, and McLaren are providing examples of insight into the social-cultural situation, the contributions of adult educators such as Jarvis and Fingeret, who have demonstrated how the social context influences the perception and judgment of individual learners, should also be recognized. As a field, adult education is beginning to recognize the importance of building increased awareness of the social-cultural context among learners.

As for the issue of building potential for transforming society, participatory research supplies a formed and informed learner with a methodology that provides a way of identifying significant problems in the sociocultural environment together with methodologies for dealing with them. Moreover, the very process of experiencing participatory research builds that essential trust within people that their efforts can be successful.

Thus, today's trends in learning project a new image for the adult learner to emulate. This model accepts the nature of the empowered learner as one who understands the learning process as well as the social environment and who responds with eagerness and confidence to the challenge of continued improvement of that setting for all people.

Second, the role of the teacher as a facilitator must be reconsidered. For many years, adult educators accepted the vision of the teacher as a passive facilitator who had no voice in the curriculum but who served as a catalysis for matching resources with the uncovered needs of the learner. Brookfield (1986) challenged this notion with his assertion that the teacher was an active member of the teaching-learning transaction who not only has personal values but also has a responsibility to share those values with students. Real-life learning elevates this concept an additional level. The psychological demands on the learner for learning in real-life situations require an assessment of personal motivational factors; an analysis of cognition, memory, and resource usage skills; and the implementation of critical thinking to challenge current thoughts and existing stereotypes in order to rise to higher levels of thought. Learners need to learn to ask introspective questions about how they learn and need to develop critical thinking skills. As Smith (1982) suggested, teachers can either help learners develop these skills or can provide them with an arena for practicing them. The social demands of the learner necessitate that the learners assess their personal stock in relationship to their social milieu and that the teachers not only help learners uncover what they already know but that they also help them broaden their knowledge within the limits of their expanding experience (Horton, forthcoming). The teachers and learning

programs thus become a mechanism for linking people with experience with those in the community who need it. These psychological and sociological demands in the individual development and social reconstruction of the learner require an active teacher who is doing far more that just presenting content or facilitating learner needs. The trends in real-life learning can provide direction and clarity to this new, dynamic role for teachers working with adult learners.

Third, real-life learning amplifies the concept of developing a problem-centered curriculum. The traditional model for curriculum development (Tyler 1949) sanctions what is taught by arguing that it has been filtered through the appropriate psychological and physiological screens of the educator and of established knowledge. In program planning models remarkably similar to the one proposed by Tyler (Brookfield 1986), adult education curriculum models (for example, Houle 1972; Knowles 1980a) begin with an assessment of the learner's needs and design a problem-centered curriculum around these needs. Real-life learning, however, suggests that learning needs stem from the learner's real-life situations. The learner's social environment influences the perspective of these needs. To work with these learners, teachers need to understand the social foundations of the learners. This includes an understanding of personal factors such as the learner's background, language, and culture as well as social factors such as poverty and discrimination.

Thus, the curriculum should be based on social realities. Unfortunately, these realities are often glossed over in many current curricula such as competency-based programs. Using social realities as the curricular foundation affects all parts of the program. For example, needs stem from the community and from the learner's personal learning strategies and social interactions. The focus on recruiting shifts from trying to appeal to individual psychological profiles to identifying community and social factors affecting learning. Program delivery incorporates both action and reflection on problems. Evaluations consider the degree to which social needs are fulfilled rather than merely measuring the academic gains of individuals. In these ways, the nature of the curriculum shifts from an individualistic and inner-directed focus to a broader concern for comprehensive problems affecting the lives of community members.

Finally, reflection on trends in adult learning confirms Kidd's premise that there indeed has been a radical shift in the field of adult education. The center of research and study now focuses more on the adult learner than on the program building process. Educators who believe that programs ultimately are evaluated by the amount of learning that occurs will recognize that this shift will result in great dividends for practitioners delivering services. However, this refocussing holds even greater potential for mending the fractured nature of the field of adult education.

The lack of cohesiveness among adult educators can readily be attributed to the propensity to define themselves narrowly in terms of program areas. Newcomers to the field have problems establishing a professional identity. For example, the American Association for Adult and Continuing Education invites members to join 2 of 37 different units! Does one choose adult psychology, or philosophy, or aging, and reject basic education, or women's issues, or technology, or teachers of adult education? The frustration in such a selection increases when one realizes that conferences are organized around the interests of these different units. Professional networks,

newsletters, and to an extent journals in the field follow the same pattern. Yet, when we look at learners, the men and women for whom our programs are intended, we see wholes--living units with a variety of needs, but needs that seldom can be separated according to the artificial program specialties developed by educators. Would it not make more sense to organize the field around the learner? Then we might have meaningful dialogue among labor educators, basic educators, professors, and local administrators about the needs of the people and how they might better be served using extension agents, librarians, or computer technologists. Such an approach has the potential of moving the field from a narrow, weak, and compartmentalized position to a cooperative, broadly based, and powerful stance.

Adult education is a fractured field of practice. This division stems from the failure to conceptualize the learner as our basic unit of organization. Our traditional propensity to look without to such diverse fields as sociology, psychology, economics, and anthropology has marked us as willing users of any source to advance learning. It is time we become more cross-disciplinary within the field and take to heart that simple yet insightful statement of Merriam (1987): "It is the adult learner, after all, which distinguishes this field from other areas of education" (p. 187).

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